

Exhibit 16

Part 1

From: Nachi.Periakaruppan@Sun.COM <nachi.periakaruppan@sun.com>
Sent: Mon Oct 05 2009 13:11:17 PDT
To: craig gering <gering@sun.com>
CC: Jai Suri <jai.suri@sun.com>; Nachi Periakaruppan <nachi.periakaruppan@sun.com>
Subject: Re: meeting this week moved to friday
Attachments: lj.091004.ppt; lj.091002.ppt

Importance: Normal
Priority: Normal
Sensitivity: None

the original from fri is the 091002 version.

i've updated the rev. this is teh 091004 version.

nachi

craig gering wrote:

> can you send me the source for these slides (ppt fine, or open office)

>

> -Craig

>

>

> Jai Suri wrote:

>> Attached is the slide deck for today's discussion.

>>

>>

>> -----

>>

>> thanks,

>> Jai

>>

>> On Sep 29, 2009, at 6:37 PM, craig gering wrote:

>>

>>> in order to accomodate product mgmt request, the meeting this week

>>> is moved to friday 9am. The agenda is to go over product mgmt

>>> ideas/use cases for one java.

>>>

>>> thx,

>>> Craig

>>>

>>> where: 9am dodgeball

>>>

>>> Dial In: 866-545-5224 (Internal Ext. 44413)

>>> Int'l: 213-787-0525

>>> Access: 9351218

>>> Host: Craig

>>>

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
TRIAL EXHIBIT 3508
CASE NO. 10-03561 WHA
DATE ENTERED _____
BY _____
DEPUTY CLERK



OneJava Market Landscape Discussion

CSG Marketing
Noel Poore





Trends

- Content is a mashup of RIA, Web and Data Management
 - Immersive user experience
 - Data driven from web services
 - Managed locally on device through computational, business logic
 - Competition enabling all content types
- Sun's leadership around Java is perceived as stagnant, and Java is considered legacy
 - Stagnant innovation
 - Only aimed at Java programmers
 - Fragmented between Java SE and Java ME, and between Java ME Mobile and TV and within Mobile and TV

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Competition enabling new models

- Android, ChromeOS, Flash, HTML5/JavaScript
- Multiple development models and developer types
- Simplified and assisted development/deployment (tools, stores, existing back-end services, etc)
- Single runtime for the multiple app models
- Seamless end-to-end app platforms
- Minimal differentiation across enterprise or consumer apps

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Modernize and Unify Java

- Leverage strengths of Java:
 - Portability and ubiquity
 - Existing standardized, implemented device and network APIs
 - A true end-to-end platform
 - Existing investments from ecosystem
- Define one development model across all device types, allowing for industry-specific customization w/o fragmentation of features
 - “Common-izing” Java for Java ME, SE and EE
 - Expanding content developer audience to Web developers and designers
 - Blended Apps
- Simplify development and deployment of content through Sun tools, store and services
- Single, performant, portable OneJava Runtime

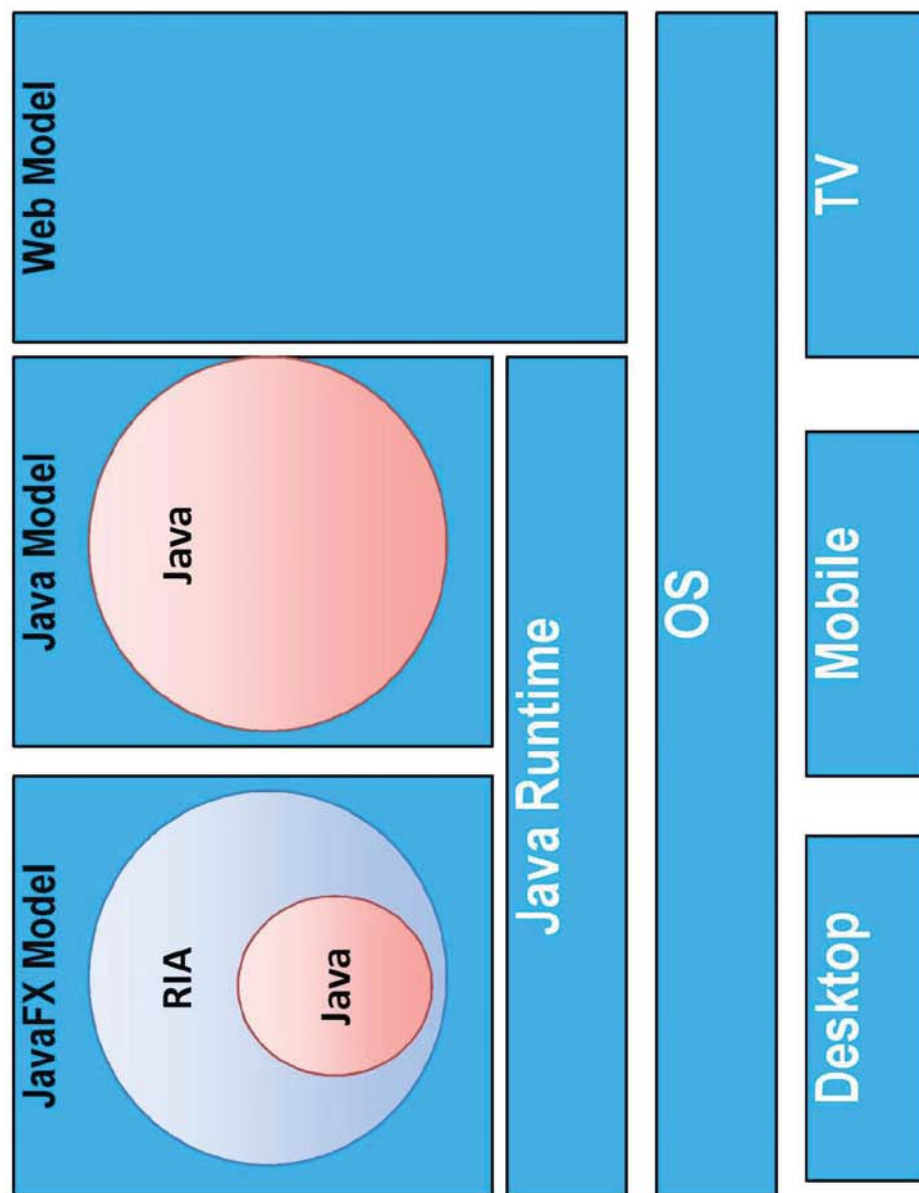
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The App Platform model today



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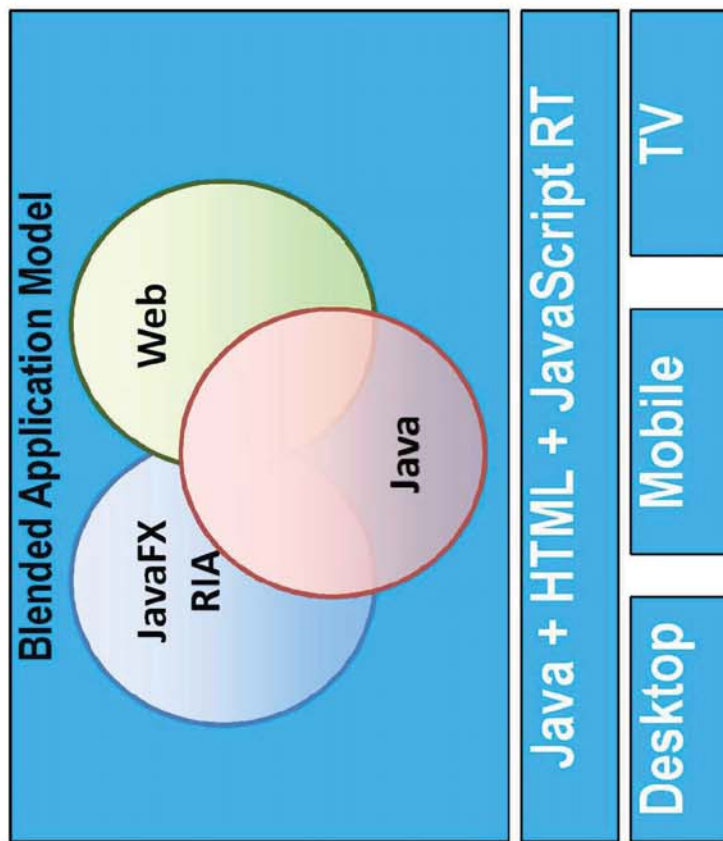
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Key Advantages of OneJava



Value to Ecosystem

- Incumbent, standardized, cross-screen, open ties to device capabilities
- Extremely fast VM
- Large developer base
- Protecting ecosystem investment
- Ubiquity as opposed to silo-ed platforms (Android, iPhone)
- Addresses fragmentation

Value to Sun

- Re-invigorates interest in Java
- Stickiness of Runtime
- Enables new services, business models

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Target Device Segments

- Smartphones (read: Open OS-based phones)
 - Next growth in wireless space
- Netbooks / MIDs
 - Likely the fastest growing consumer device for next 2-3 years
- Hi-end TV / Set Top Boxes
 - Sets up for Quad play
- Desktop / Laptops
 - Current battleground
- Server Configurations
- Minimum hardware: T-Mobile G2 class hardware
- Potentially any other devices that fits min HW (eg. VOIP devices, etc)
- Not for Feature Phones, Low-Mid end DTV/STBs (Java ME continues)

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OneJava on a Device



- OneJava defines the App Platform and is implemented as the Runtime
- OneJava can be extended to enable FWs and Apps but this is defined w/in specific markets / business
- OneJava RT is highly performant and portable
- OneJava RT will have to provide reference AMS
- OS is out of scope

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Feature Quick Hits for OneJava 1.0

- Hotspot VM and core libraries from JDK7 codebase
- SE subset APIs + ME APIs + extras + cleanup
- JavaScript engine integrated
- Java FX 1.3 (SoMa) integrated
- HTML5/CSS integrated
- Use JavaFX model for common & profile definition
- Initial device targets: G2 handset (Android) and Acer Netbook (Linux)
- Embedded runtime expectations of performance and memory usage

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Monetization of OneJava

- OneJava is a platform: an application model, a runtime and a set of tools
 - > Not a business
- CSG traditional businesses (desktop, mobile and TV) will implement products and services based on OneJava
 - > Industry specific
 - > Potentially different business models
 - > TB discussed later
- Example: OneJava for Mobile is likely a Smartphone product w/ a set of Carrier Services, and monetization happens at carrier

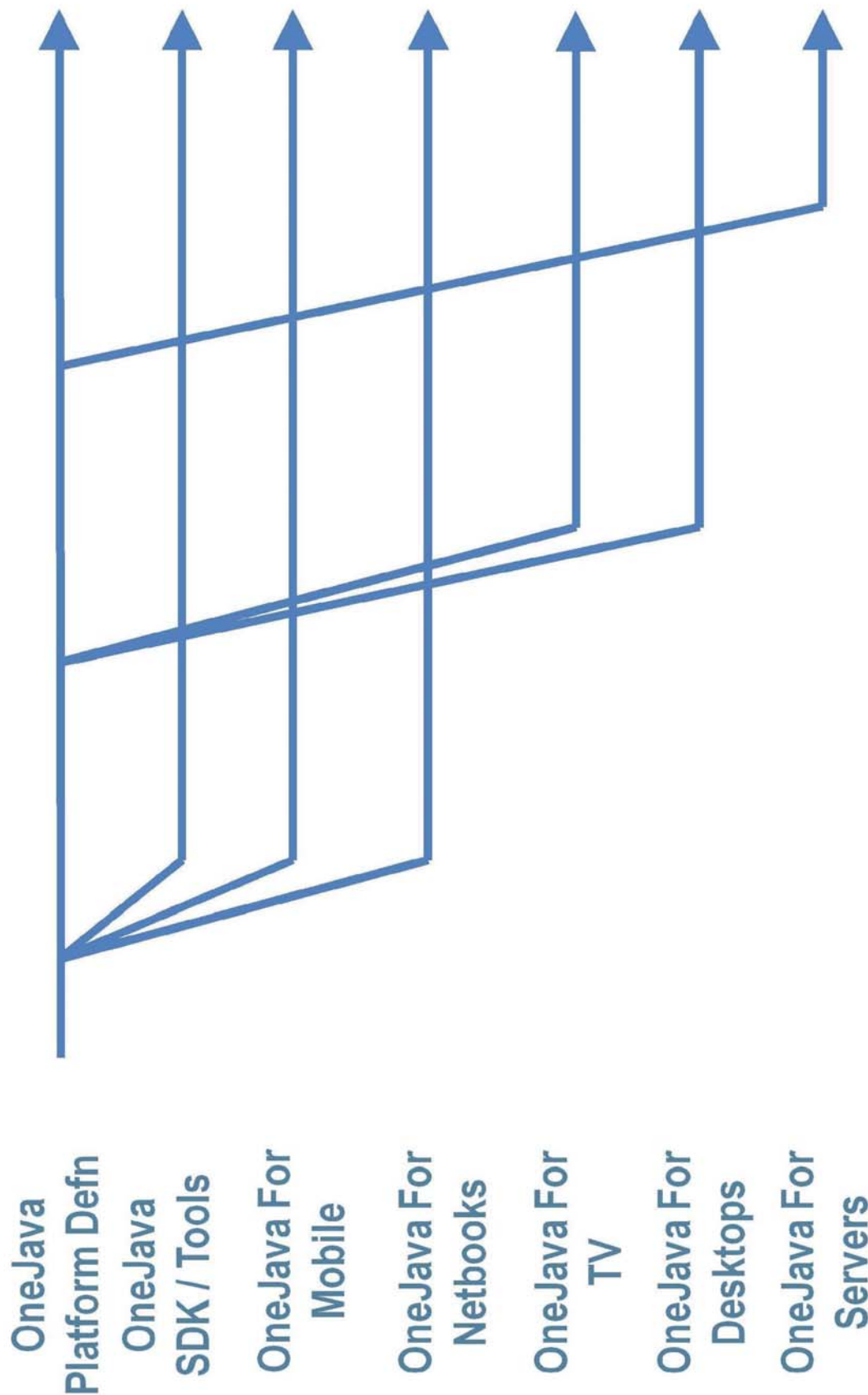
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Proposed Development Train



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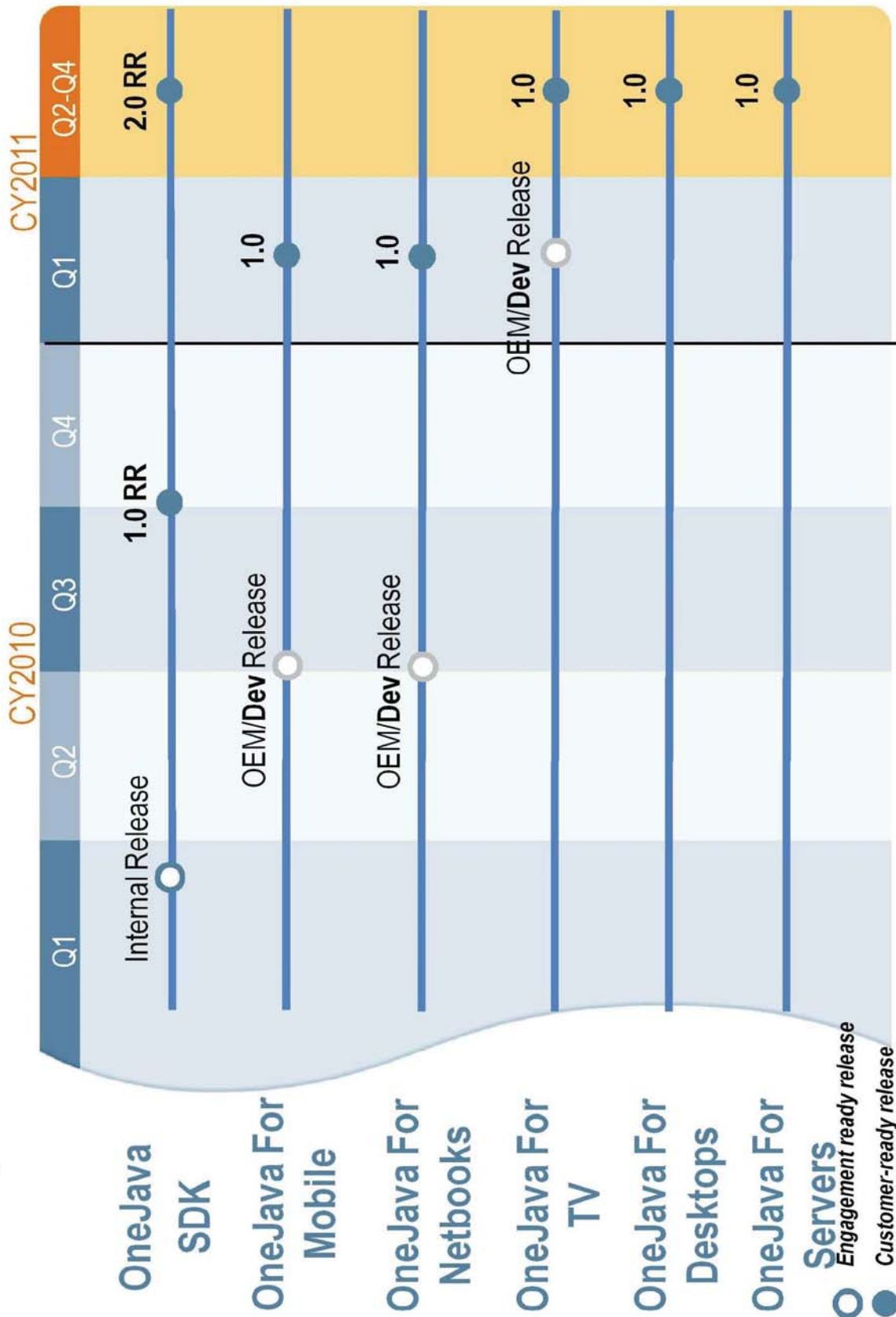
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Proposed Roadmap





Expected Adoption of OneJava

	CY11	CY12	CY13
Smartphones			OneJava
Feature Phones		Java ME + JavaFX	
Hi-end DTV			OneJava
Mainstream DTV		Java ME + JavaFX	
Netbooks			OneJava
Desktops	TBD: Java SE + JavaFX / OneJava Phase Over / Cut Over in CY11		
Servers	TBD: Java EE / OneJava Phase Over or Cut Over in CY12		

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OneJava Developer Model Discussion

Jai Suri
Noel Poore



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Development & Deployment Environment

Tools

- IDE
- RAD Tool
- Authoring Tool

Tool Extensions

- OneJava SDK
- Emulator integration
- On-Device debugging
- Messages console
- Applications log
- Assets Importer
- Services integration

Command Line Tools

- Packaging
- Project Creation
- Debugging

SDK Documentation

Emulator

- Skins/Profiles
- Network Simulation

Development Device

Server-side Integration Framework

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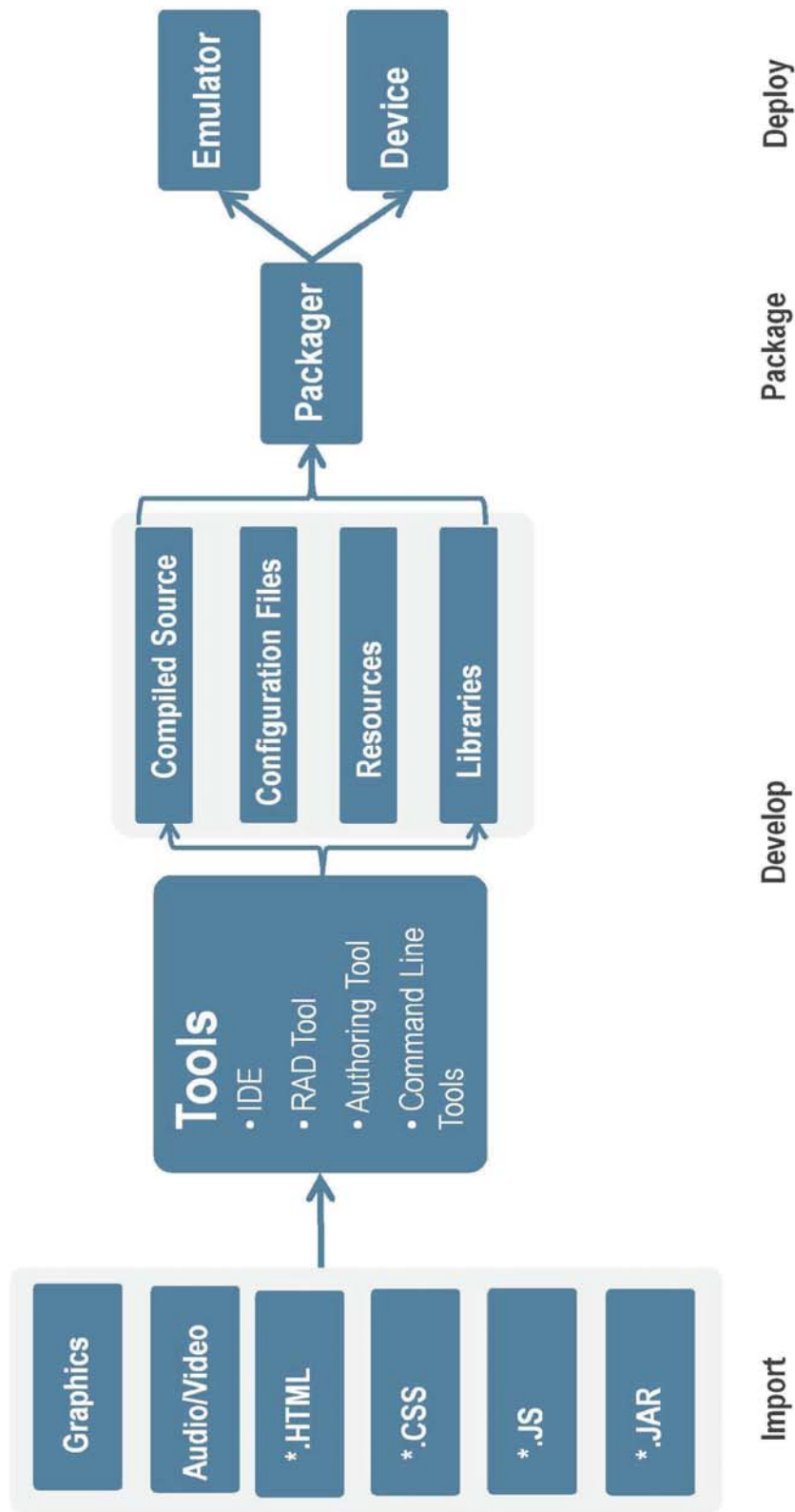
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Development Workflow





Developer Profiles

Sample profiles of developers building applications on OneJava

	Web Developer	Mobile (Java) Developer	JavaFX Developer	Java SE Developer
Which programming languages will they use?	HTML, JavaScript, CSS	Java	JavaFX Script, CSS, Java	Java
What tools will they use?	Authoring Tool RAD Tool	RAD Tool IDE	Authoring Tool RAD Tool	RAD Tool IDE
What types of applications will they build?	End-user applications	<ul style="list-style-type: none"> • End-user applications • On-device services used by applications 	End-user applications	<ul style="list-style-type: none"> • End-user applications • On-device services used by applications
What frameworks will they use?	JavaScript/AJAX frameworks e.g., JQuery	Custom MVC framework Legacy support to run LWUIT, MSA applications	Custom MVC framework	Custom MVC framework

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Development Model

Considerations

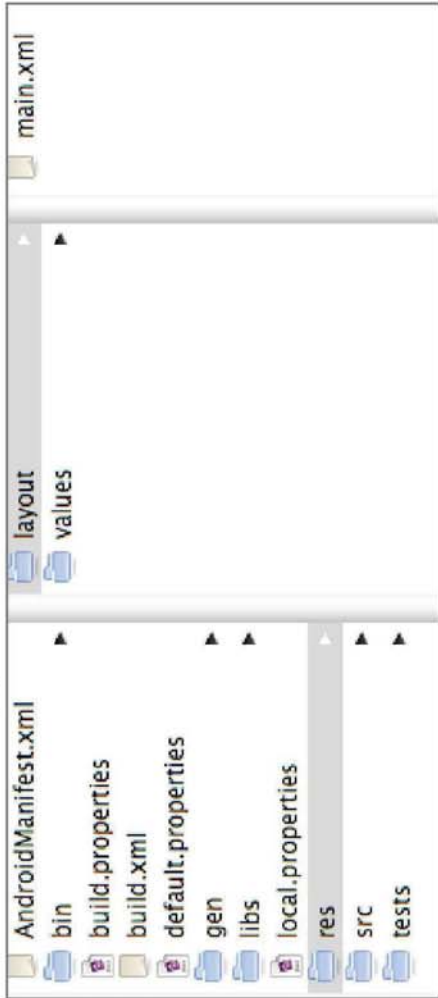
- OneJava is primarily a client-side platform
- Hence simplifying UI development is paramount to success
- Typical UI consists of various components
 - Data
 - Interaction design
 - Visual design
 - Connectivity
 - Multi-threading
 - Security
 - I18N
 - Validation
 - Remoting
 - Unit testing
 - Multimedia
 - Black magic
- Easily fit into an N-tiered service-oriented architecture



Competitive Development Frameworks

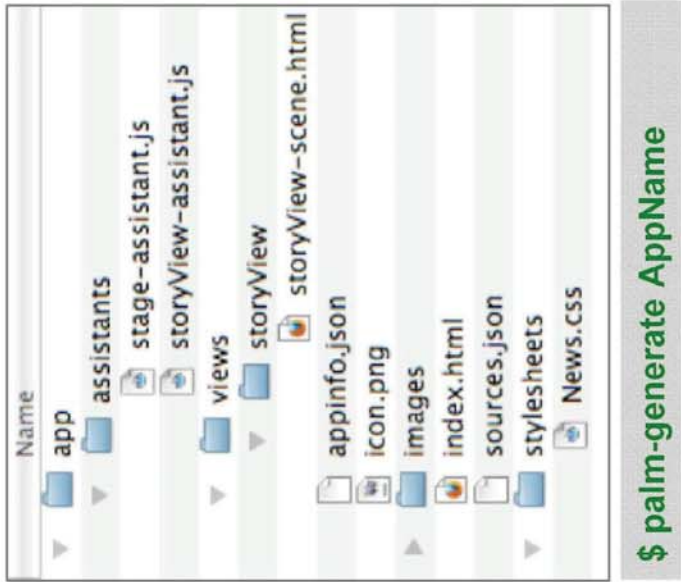
Most UI technologies have adopted MVC or derivative framework to simplify UI development, including new mobile platforms such as Android and Palm WebOS

Android's Application Framework



```
$ android create project \
--package com.android.helloandroid \
--activity HelloAndroid --target 2
--path <path-to-your-project>/HelloAndroid
```

WebOS' Application Framework

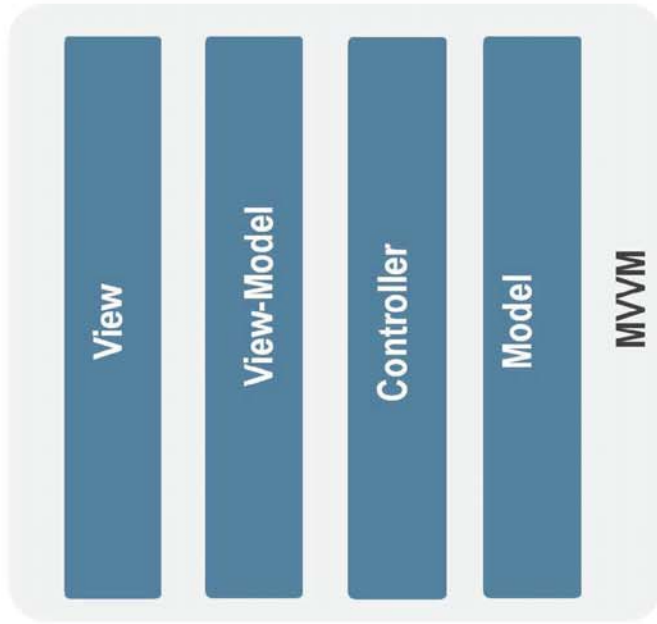




Development Framework Guidelines

OneJava Application Framework characteristics

- Ideal framework would be MVVM (Model-View-ViewModel)
 - > Separates views from view logic enabling cross-screen UI development
- Framework should not be mandatory to develop applications
- Framework should scale from none -> MVC -> MVVM
- Should enable easy service-oriented application development





Development Framework Guidelines

OneJava Application Framework characteristics

- > Clearly separates view, model and control layers
- > Allows developers in a team to work independently on each layer and integrate later
- > Allows developers to use the technology that works best for each layer
- > Allows each layer to be unit tested independently

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OneJava Development Frameworks

Current development models on Java platform are

#1: Java-based Development Model

Java	UI, Interaction, Services, Platform API
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#2: JavaFX-based Development Model

JavaFX Script	UI (Graphics, Rich media, UI Widgets), Interaction
CSS	Style
Java	Services, Platform API



OneJava Development Frameworks

OneJava Development framework should offer web application development models that allow developers to combine the strengths of web technologies

#3: Web-based Development Model

HTML 5	Layout and UI Widgets
CSS	Style
JavaScript	UI interaction logic
Java	Services & Platform API

#4: Blended Development Model

HTML 5	Layout and UI Widgets
CSS	Style
JavaScript	UI interaction logic
JavaFX Script	Rich media, animation, graphics
Java	Services & Platform API

